Q&A

Q. Slate in the Shower

My client wants to install slate tile in her shower to match the tile on her bathroom floor. I know that slate is porous and harder to keep clean than ceramic tile, but is there a good sealer that can be used with the slate so that maintenance will be manageable?

A. *Contributing editor Michael Byrne, a tile-setter and consultant in Los Olivos, Calif., and moderator of* JLC *Online's tile forum, responds:* The quality and density of slate can vary quite a bit. Honed slate tiles dense enough to be exposed to water don't absorb sealers readily, whereas some softer slates with cleft finishes will actually start disintegrating in water.

And while not all penetrating sealers perform well with slate, top-coating sealers can lead to disaster when they yellow and begin to chip off.

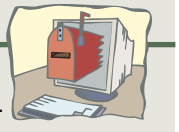
Generally speaking, I think that most tiles made from porous stones like slate and limestone are a bad choice in a shower stall. Regardless of the type of sealer used or how often it's applied, keeping slate or limestone in a sanitary condition is almost impossible, as is removing the "dirty clothes" smell that these stones tend to accumulate.

Porcelain-tile look-alikes might appear to be the first and best alternative, but they have their problems too. Some of these tiles have a coarse texture meant to make them slip-resistant; unfortunately, it also allows dirt, grime, grease, soap, and oils to lodge permanently on the tiles' surface.

For best results, choose a smooth-surface stone tile with absorption properties similar to those of vitreous or impervious tiles — and avoid any stones that require topical applications to achieve these desired properties.

GOT A QUESTION?

Send it to Q&A, *JLC,* 186 Allen Brook Lane, Williston, VT 05495; or e-mail to jlc-editorial@hanleywood.com.



Q. How Strong Are SIPs?

In a SIP, how secure is the bond between the OSB skin and the EPS (expanded polystyrene) core? Can this bond be compromised by water infiltration or insect damage, or could the insulated core deteriorate over time? If that bond were to fail, it seems to me the whole structure would fall apart like a giant house of cards.

A. *Gary Pugh, of Alternative Building Concepts, a Santa Rosa, Calif., green building company that specializes in SIPs construction, responds:* EPS — a closed-cell, foamed plastic insulation with a 30-year track record — is inert to a wide range of chemicals, will not rot, has no food value, and will not attract insects, parasites, or any animal or plant life.

It's also nonhygroscopic, which means it does not readily absorb moisture, and its compressive strength and thermal properties are minimally affected by the small amounts (typically less than 0.2 percent by weight) of moisture it can absorb, and by temperature cycling.

EPS insulation is manufactured to meet the standards of ASTM C578, with ongoing compliance with this standard addressed through a third-party certification program.

In addition, the adhesives used to laminate wood facers to EPS insulation have to meet minimum performance standards established by the major codes with regard to exposure to moisture, temperature, aging, oxidation, mold growth, and compatibility with the EPS insulation core.

Reputable manufacturers of SIPs use adhesives that are in compliance with ICC Evaluation Service acceptance criteria AC05.

If a SIPs house can be picked up whole by a tornado, dropped a few feet away, then get lifted up by a pair of cranes and set down on a new foundation with little or no damage to the structure — which I've seen documented — I'm pretty confident that these panels won't delaminate.

Q&A

Q. Is Drywall Needed With Spray-Foam Basement Insulation?

When the interior walls of an unfinished basement have been insulated with Icynene (or a similar spray-foam insulation), can the foam be left exposed, or does it have to be covered by a noncombustible material?

A. *John Evans, codes and standards manager with Icynene, responds:* Most building codes require that foam plastic insulation — including both rigid and open-cell low-density foam products — be separated from occupied living space (including basements) by an approved 15-minute thermal barrier.

While 1/2-inch gypsum board is recognized for this purpose by most codes, other less-common materials that can be used are sprayed-on cementitious coatings (A/D Fire Protection Systems, www.adfire.com) and mineral-fiber coatings (American Sprayed Fibers, www.asfiusa.com). Before using a system not specifically mentioned by code, of course, it's always a good idea to consult first with your local building inspector.

In concealed spaces — like crawlspaces or unvented, conditioned attics — where there's no occupancy, an ignition barrier is usually required. Most building codes specifically approve 3/8-inch drywall for this purpose, but other options include spray-on intumescent paints — such as FF 88 (International Fire Resistant Systems, www.firefree.com) — 1 1/2-inch mineral fiber, 1/4-inch wood structural panels, and .016-inch-thick corrosion-resistant metal.

In some unvented, conditioned attic applications, Icynene has been approved for use without an ignition barrier; for details, see Icynene's ICC-ES NER-420 report. Again, consult with your local code officials before choosing this approach or deciding on a specific ignition-barrier product or material.